

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1445/APTD

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 1

**Complete if Known**

|                        |                     |
|------------------------|---------------------|
| Application Number     | 10/142,084 (25, 80) |
| Filing Date            | 5/10/2000 7/11/03   |
| First Named Inventor   | Anthony C. Zuppers  |
| Art Unit               | 3945 1253           |
| Examiner Name          | THE D. Diamond      |
| Attorney Docket Number | 22122878.12         |

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

Examiner  
Signature

Date Considered

5/1/24

**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP §202. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind's Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbol as indicated on the document under WPO Standard ST. 16 if possible. <sup>6</sup> Applicant to place a check mark here if English language translation is attached.

**Budget Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## Substitution for form 1445-PTC

### INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

cl

**Complete If Known**

|                        |                     |
|------------------------|---------------------|
| Application Number     | 10/142,684 625,801  |
| Filing Date            | 5/10/2005 7/23/2007 |
| First Named Inventor   | Anthony C. Zippem   |
| Art Unit               | 1753                |
| Examiner Name          | Diamond, Alan D.    |
| Attorney Docket Number | 22122878-12         |

## U.S. PATENT DOCUMENTS

[illegible]

**FOREIGN PATENT DOCUMENTS**

[illegible]

Examiner  
Signature

Date Considered:

ε/δν

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique document designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by its two-letter code (WIPO Standard 77.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard 37. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**

Substitute for form 1449BPTD

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet

of

## **Complete If Known**

|                        |                     |
|------------------------|---------------------|
| Application Number     | 10/447,688 625, 801 |
| Filing Date            | 5/10/2004 7/13/2003 |
| First Named Inventor   | Anthony C. Zucaro   |
| Group Art Unit         | 1753                |
| Examiner Name          | Diamond, Alan D.    |
| Attorney Docket Number | 22122878-12         |

## **OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue information, publisher, city, state, country where published | Y <sup>2</sup> |
|-------------------|-----------------------|---|----------------|
| ADD               | 7                     | AUERBACH, Daniel J.; "Hitting the Surface-Softly"; Science, 294, (2001), pp. 2488-2489  | -              |
| ADD               | 8                     | BONDZIE, V. A., et al.; "Oxygen adsorption ... gold particles ... TiO <sub>2</sub> (110)"; J. Vac. Sci. Tech. A., (1999) 17, pp. 1717 and figure 3  | -              |
| ADD               | 9                     | BOULTER, James; "Laboratory Measurement of OH ..."; <a href="http://pearl1.lanl.gov/wsa2002/WSA2002talks.pdf">http://pearl1.lanl.gov/wsa2002/WSA2002talks.pdf</a> (2002).   | -              |
| ADD               | 10                    | CHAN H.Y.H., et al.; "Methanol Oxidation On Palladium Compared To Rhodium..."; J. Catalysis v. 174(42) pp. 191-200 (1998) (abstract and figure 1 only)  | -              |
| ADD               | 11                    | CHIANG, T.-C.; "Photoemission studies of quantum well states in thin films; Surf. Sci. Rpts.39 (2000) pp 181-235  | -              |
| ADD               | 12                    | CHUBB, D. L., et al.; "Semiconductor Silicon as a Selective Emitter"; <a href="http://www.thermopv.org/TPV5-2-05-Chubb.pdf">http://www.thermopv.org/TPV5-2-05-Chubb.pdf</a> (abstract only) (Date Unknown).   | -              |
| ADD               | 13                    | CORCELLI, S. A., et al.; "Vibrational energy pooling in CD on NaCl(100) ..."; J. Chem. Phys. (2002) 116, pp. 8079-8092  | -              |
| ADD               | 14                    | DANESE, A., et al.; "Influence of the substrate electronic structure on metallic quantum well ..."; Prog. Surf. Sci., 67, (2001), pp 249-258  | -              |
| ADD               | 15                    | DAVIS, J. E., et al.; "Kinetics and dynamics of the dissociative chemisorption of oxygen on Ir(111)"; J. Chem. Phys. 107 (3), (1997), pp 943-952  | -              |
|                   |                       |   |                |
|                   |                       |   |                |
|                   |                       |   |                |

Examiner  
 Signature

*Alan D. Diamond*

Date  
 Considered

6/1/04

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 800. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup>Applicant's unique citation designation number (optional). <sup>3</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449BPTO

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 1

## **Complete if Known**

|                        |                    |
|------------------------|--------------------|
| Application Number     | 10/142,664 C15 501 |
| Filing Date            | 5/10/2002 7/25/02  |
| First Named Inventor   | Antony C. Zupercro |
| Group Art Unit         | 1753               |
| Examiner Name          | Diamond, Alan D.   |
| Attorney Docket Number | 22122878-12        |

## **OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume- issue (when appropriate), publisher, and address (country, city, state, zip code). | 12 |
|-------------------|-----------------------|--|----|
| ADD               | 16                    | DIEKHONER, L., et al.; "Parallel pathways in methanol... Pt(111)"; Surf. Sci. 409 (1998) pp 384-391  | -  |
| ADD               | 17                    | DIESING, D., et al.; "Aluminium oxide tunnel junctions..."; Thin Solid Films, Vol. 342 (1-2) (1999) pp. 282-290  | -  |
| ADD               | 18                    | DEMATTEO, R. S., et al.; "Enhanced photogeneration of carriers... vacuum gap"; Appl. Phys. Lett. (2001) 79, pp. 1894-1896  | -  |
| ADD               | 19                    | DEMATTEO, R. S., et al.; "Introduction to and Experimental Demonstration of Micro-gap ThermoPhotoVoltaics"; <a href="http://www.thermopv.org/37D/Matteo.html">http://www.thermopv.org/37D/Matteo.html</a> (abstract only) (Date Unknown)   | -  |
| ADD               | 20                    | DOGWILER, Urs, et al.; "Two-dimensional ... catalytically stabilized ... lean methane-air ..."; Combustion and Flame, (1999), 116(1,2), pp 243-258   | -  |
| ADD               | 21                    | ECHENIQUE, P. M., et al.; "Surface-state electron dynamics in noble metals"; Prog. Surf. Sci., 67, (2001), pp 271-283  | -  |
| ADD               | 22                    | ENDO, Mekoro, et al.; "Oxidation of methanol ... on Pt(111) ..."; Surf. Sci. 441 (1999) L931-L937, Surf. Sci. Letters  | -  |
| ADD               | 23                    | FAN, C. Y., et al.; "The oxidation of CO on RuO2 ..."; J. Chem. Phys. 114, (2001), pp. 10058-10062   | -  |
| ADD               | 24                    | FANN, W.S., et al.; "Electron thermalization in gold"; Phys. Rev. B (1992) 46 pp. 13592-13595  | -  |
|                   |                       |  |    |
|                   |                       |  |    |
|                   |                       |  |    |

|                    |                        |                  |               |
|--------------------|------------------------|------------------|---------------|
| Examiner Signature | <u>Alan D. Diamond</u> | Date Constituted | <u>5/1/04</u> |
|--------------------|------------------------|------------------|---------------|

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup> Applicant's unique citation designation number (optional). <sup>3</sup> Applicant is to place a check mark here if English language translation is attached.

Budget Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |    |  |  |
|--|----|--|--|
| Substitute for form 1449B/PTO<br><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b><br>(use as many sheets as necessary) |    | <b>Complete if Known</b><br>Application Number 10/142-684 C-1, B-1<br>Filing Date 5/10/2002 5/10/2002<br>First Named Inventor Antioch C. Zubacoro<br>Group Art Unit 1753<br>Examiner Name Diamond, Alan D.<br>Attorney Docket Number 22122878-12 |  |
| Sheet  | of |  |  |

| OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS |           |  |    |
|---|-----------|--|----|
| Examiner Initials*                                | Cite No.† | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city, state/country where published | †2 |
| ADD   | 25        | QIE, Adam T., et al.; "The dynamics of O2 adsorption on Pt(533)..."; J. Chem. Phys. (2000) 113, pp. 10333-10343  | -  |
| ADD   | 26        | GERGEN, Brian, et al.; "Chemically Induced Electronic Excitations at Metal Surfaces"; Science, 294, (2001) pp. 2521-2523   | -  |
| ADD   | 27        | GULIANTS, Elena A., et al.; "A 0.5-µm-thick polycrystalline silicon Schottky..."; Appl. Phys. Lett., (2002), 80, pp. 1474-1476   | -  |
| ADD   | 28        | GUMHALTER, B., et al.; "Effect of electronic relaxation ... adsorption reaction rates"; Phys. Rev. B (1984) 30 pp. 3179-3190   | -  |
| ADD   | 29        | HALONEN, Lauri, et al.; "Reactivity of vibrationally excited methane on nickel..."; J. Chem. Phys. (2001) 115, pp. 5611-5619   | -  |
| ADD   | 30        | HASEGAWA, Y., et al.; "Modification of electron ... standing wave ... Pd ..."; Surf. Sci., in press, 11 April 2002   | -  |
| ADD   | 31        | HENRY, Claude R.; "Catalytic activity ... nanometer-sized metal clusters"; Applied Surf. Sci., 164, (2000) pp 252-259  | -  |
| ADD   | 32        | HESS, S., et al.; "Hot Carrier Relaxation ... Phonon Scattering in GaN"; <a href="http://www.physics.ox.ac.uk/taylor/issaga/hot%20carrier%20poster.pdf">http://www.physics.ox.ac.uk/taylor/issaga/hot%20carrier%20poster.pdf</a> (Date Unknown)                | -  |
| ADD   | 33        | HO, Wilson, <a href="http://www.lasp.cornell.edu/lasp_data/wilsonho.html">http://www.lasp.cornell.edu/lasp_data/wilsonho.html</a> (Date Unknown)   | -  |
|   |           |  |    |
|   |           |  |    |
|   |           |  |    |

|                    |                        |                 |        |
|--------------------|------------------------|-----------------|--------|
| Examiner Signature | <i>Alan D. Diamond</i> | Date Considered | 5/1/04 |
|--------------------|------------------------|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

† Applicant's unique citation designation number (optional). ‡ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

|   |    |                        |                      |
|---|----|------------------------|----------------------|
| Substitute for form 1449/PTO  |    | Complete if Known      |                      |
| <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b><br><br>(use as many sheets as necessary) |    | Application Number     | 10/479,684-625, 501  |
|   |    | Filing Date            | 3/10/2002 11/23/2002 |
|   |    | First Named Inventor   | Anthony C. Zuccone   |
|   |    | Group Art Unit         | 1753                 |
|   |    | Examiner Name          | Diamond, Alan D.     |
| Sheet   | of | Attorney Docket Number | 22122878-12          |

| OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS |          |  |                |
|--|----------|--|----------------|
| Examiner Initials                                  | Cite No. | Includes name of the author (in CAPITAL LETTERS); title of the article (when appropriate); title of the item (book, magazine, journal, serial, symposium, catalog, etc.); date, page(s), volume/issue number; publisher; and/or country where published. | Y <sup>2</sup> |
| ADD  | 34       | HOHLFELD, J. et al.; "Electron and lattice dynamics ... optical excitation of metals"; Chemical Physics, 251 (2000) pp 237-258   | -              |
| ADD  | 35       | HONKALA, Karolina, et al.; "Ab initio study of O2 precursor states on the Pd(111)"; J. Chem. Phys. (2001) 115, pp. 2297-2302   | -              |
| ADD  | 36       | HOU, H.; Y., et al.; "Chemical Interactions of Super-Excited Molecules on Metal Surfaces"; <a href="http://www2.chem.ucsb.edu/~wodko/papers/dan1.pdf">http://www2.chem.ucsb.edu/~wodko/papers/dan1.pdf</a> (Date Unknown).                               | -              |
| ADD  | 37       | HOU, H., et al.; "Direct multiexcitation relaxation of highly vibrationally excited NO ..."; J. Chem. Phys., 110, (1999) pp 10660 - 10663  | -              |
| ADD  | 38       | HUANG Y., et al.; "Observation of Vibrational Excitation and Deexcitation for NO from Au(111) ..."; Phys. Rev. Lett., 84, (2000) pp 2985 - 2988  | -              |
| ADD  | 39       | HUANG, Yuhui, et al.; "Vibrational Promotion of Electron Transfer"; SCIENCE, VOL 290, 6 OCTOBER 2000, pp 111 - 113   | -              |
| ADD  | 40       | IBH; "NanoLED overview"; <a href="http://www.ibh.co.uk/products/light_sources/nanoled_main.htm">http://www.ibh.co.uk/products/light_sources/nanoled_main.htm</a> (Date Unknown).   | -              |
| ADD  | 41       | IBH; "Red picosecond laser sources"; <a href="http://www.ibh.co.uk/products/light_sources/nanoled/heads/red_laser_heads.htm">http://www.ibh.co.uk/products/light_sources/nanoled/heads/red_laser_heads.htm</a> (Date Unknown).                           | -              |
| ADD  | 42       | IFTIMIA, Beana, et al.; "Theory ... scattering of molecules from surface"; Phys. Rev. B (2002) 65, Article 125401  | -              |
|  |          |  |                |
|  |          |  |                |
|  |          |  |                |

|                    |                        |                 |        |
|--------------------|------------------------|-----------------|--------|
| Examiner Signature | <i>Alan D. Diamond</i> | Date Considered | 6/1/04 |
|--------------------|------------------------|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 600. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Approved for use through 10/31/2002, OMB 0031-0001  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

PTO/SB/688 (10-01)

|  |    |                          |                      |
|--|----|--------------------------|----------------------|
| Substitute for form 1449B/PTO<br><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b><br>(use as many sheets as necessary) |    | <b>Complete if Known</b> |                      |
| Sheet  | of | Application Number       | 10/142,484 (25) 2001 |
|  |    | Filing Date              | 04/02/2002 7/25/2001 |
|  |    | First Named Inventor     | Anthony C. Zubocero  |
|  |    | Group Art Unit           | 1753                 |
|  |    | Examiner Name            | Diamcod, Alan D.     |
|  |    | Attorney Docket Number   | 21122878-12          |

| OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS |          |  |    |
|---|----------|--|----|
| Examiner Initials                                 | Cite No. | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), author(s), editor(s), publisher, where published | TS |
| ADD   | 43       | ISHIKAWA, Yasuyuki, et al.; "Energetics of H <sub>2</sub> O dissociation and CO <sub>2</sub> +OH <sub>2</sub> reaction .. Pt."; Surf. Sci. preprints SUSC 12630, 27 April 2002   | -  |
| ADD   | 44       | JOHNSON, R. Colin; "Molecular substitution ...terahertz switch arrays"; EE Times, (04/10/00, 3:35 p.m. EST) <a href="http://www.eet.com/story/0EG2000041050057">http://www.eet.com/story/0EG2000041050057</a>  | -  |
| ADD   | 45       | KAO, Chia-Ling, et al.; "The adsorption ... molecular carbon dioxide on Pt(111) and Pd(111)"; Surf. Sci., (2001) Article 12570   | -  |
| ADD   | 46       | KATZ, Gil, et al.; "Non-Adiabatic Charge Transfer Process of Oxygen on metal Surfaces"; Surf. Sci. 425(1) (1999) pp. 1-14  | -  |
| ADD   | 47       | KAWAKAMI, R. K., et al.; "Quantum-well states in copper thin films"; Nature, 398, (1999) pp 132-134  | -  |
| ADD   | 48       | KOMEDA, T., et al.; "Lateral Hopping of Molecules Induced by Excitation of Internal Vibration..."; Science, 295, (2002) pp 2655-2658   | -  |
| ADD   | 49       | LEWIS, Steven P., et al.; "Continuum Elastic Theory of Adsorbate Vibrational Relaxation"; J. Chem. Phys. 108, 1157 (1998)  | -  |
| ADD   | 50       | LEWIS, Steven P., et al.; "Substrate-adsorbate coupling in CO-adsorbed copper"; Phys. Rev. Lett. 77, 5241 (1996)   | -  |
| ADD   | 51       | LI, Shengping, et al.; "Generation of wavelength-tunable single-mode picosecond pulses ..."; Appl. Phys. Lett. 76, (2000) pp 3676 - 3678   | -  |
|   |          |  |    |
|   |          |  |    |
|   |          |  |    |

|                    |                        |                 |        |
|--------------------|------------------------|-----------------|--------|
| Examiner Signature | <i>Alan D. Diamcod</i> | Date Considered | 6/1/04 |
|--------------------|------------------------|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

|  |    |  |  |
|--|----|--|--|
| Substitute for form 1445B/PTO<br><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b><br>(use as many sheets as necessary) |    | <b>Complete If Known</b><br>Application Number: 10/149,684 (25 9-1)<br>Filing Date: 5/16/2002 (7/23/02)<br>First Named Inventor: Anthony C. Zupero<br>Group Art Unit: 1753<br>Examiner Name: Diamond, Alan D.<br>Attorney Docket Number: 22122878-12 |  |
| Sheet  | of |  |  |

| OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS |            |  |    |
|---|------------|--|----|
| Examiner Initials                                 | Cite No. 1 | Include name of the author (in CAPITAL LETTERS); title of the article (when appropriate); title of the item (book, magazine, journal, serial, symposium, catalog, etc.); date, page(s), volume- issue numbers; publisher; city and country where published | 12 |
| ADD   | 52         | MITSUMI, T., et al.; "Coadsorption and interactions of O and H on Pd(111)"; Surf. Sci., Article 12767, (2002)  | -  |
| ADD   | 53         | MOULA, Md. Golam, et al.; "Velocity distribution of desorbing CO <sub>2</sub> in CO oxidation on Pd(110)-"; Appl. Surf. Sci., 169-170, pp 268-272 (2001)   | -  |
| ADD   | 54         | MULET, Jean-Philippe, et al.; "Nanoscale radiative heat transfer between a small particle ..."; Appl. Phys. Lett., 78, (2001) p 2931   | -  |
| ADD   | 55         | NIENHAUS, H., et al.; "Direct detection of electron-hole pairs generated by chemical reactions on metal surfaces"; Surf. Sci. 445 (2000) pp 335-342  | -  |
| ADD   | 56         | NIENHAUS, H.; "Electronic excitations by chemical reactions on metal surfaces"; Surf. Sci. Rep. 45 (2002) pp 1-78  | -  |
| ADD   | 57         | NIENHAUS, H., et al.; "Selective H atom sensors using ultrathin Ag/Si Schottky diodes"; Appl. Phys. Lett. (1999) 74, pp. 4046-4048   | -  |
| ADD   | 58         | NIENHAUS, Hermann; "Electron-hole pair creation by reactions at metal surfaces"; APS, March 20-26, 1999, Atlanta, GA, Session SC33 [SC33.01]   | -  |
| ADD   | 59         | NIENHAUS, H., et al.; "Electron-Hole Pair Creation at Ag and Cu ... of Atomic Hydrogen and Deuterium"; Phys. Rev. Lett., 82, (1999) pp. 466-449  | -  |
| ADD   | 60         | NOLAN P. D., et al.; "Direct verification of ... precursor to oxygen dissociation on Pd(111)"; Surf. Sci. v. 419(1) pp. L107-L113, (1998)  | -  |
|   |            |  |    |
|   |            |  |    |
|   |            |  |    |

|                                    |                         |
|------------------------------------|-------------------------|
| Examiner Signature: <i>Alan D.</i> | Date Considered: 5/1/04 |
|------------------------------------|-------------------------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 909. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language translation is attached.

Briefest Next Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Substitute for form 1442B-PTO

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 1

## **Complete If Known**

Application Number 10/142,444 C25, 8-1  
 Filing Date 5/10/2002 7/25/02  
 First Named Inventor Anthony C. Zupercro  
 Group Art Unit 1753  
 Examiner Name Diamond, Alan D.  
 Attorney Docket Number 21122878-12

## **OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

| Examiner Initial | Cite No. | Include name of the author (in CAPITAL LETTERS); title of the article (when appropriate); title of the item (book, magazine, journal, patent, symposium, catalog, etc.); date, page(s), volume-issue number(s); publisher, city and/or country where published. | T <sup>1</sup> |
|------------------|----------|---|----------------|
| ADD              | 61       | NOLAN, P. D., et al.; "Molecularly chemisorbed intermediates to oxygen adsorption on Pt ..."; J. Chem. Phys. 111, (1999), pp 3696 - 3704  | -              |
| ADD              | 62       | NOLAN, P. D., et al.; "Transitional ... Precursors to Oxygen Adsorption on Pt(111)"; Phys. Rev. Lett., 81, (1998) pp 3179 - 3182  | -              |
| ADD              | 63       | OGAWA, S., et al.; "Optical ... and Femtosecond Dynamics in Ag/Fe(100) Quantum Wells"; Phys. Rev. Lett. 81, 116801 (2002)   | -              |
| ADD              | 64       | PAGGEL, J. J., et al.; "Quantum-Well States as Fabry-Pérot Modes in a ..."; Science, 283, (1999), pp 1709 - 1711  | -              |
| ADD              | 65       | PAGGEL, J. J., et al.; "Quasiparticle Lifetime ... Ag/Fe(100) Quantum Wells"; Phys. Rev. Lett. (1999) 81, pp. 5632-5635   | -              |
| ADD              | 66       | PAGGEL, J.J., et al.; "Quantum well photoemission from atomically uniform Ag films ..."; Applied Surf. Sci., 162 - 163, (2000), pp 78 - 85  | -              |
| ADD              | 67       | RETTNER, C. T., et al.; "Dynamics ... chemisorption of O <sub>2</sub> on Pt(111) ... chemisorbed precursor..."; J. Chem. Phys. (1991) 94, pp. 1626-1635 (abstract only)   | -              |
| ADD              | 68       | RINNEMO, Mats; "Catalytic Ignition and Kinetic Phase Transitions"; 1996; <a href="http://www2.fh.chalmers.se/ctb/cis/doc/9396/RinnemoMats.html">http://www2.fh.chalmers.se/ctb/cis/doc/9396/RinnemoMats.html</a>  | -              |
| ADD              | 69       | ROBERTSON, A. J. B.; "Catalysis of Gas Reactions by Metals"; Logos Press Limited; 1970; LC # 70-89936; pp. 1-5, 10, 41; Great Britain, Adlard & son Ltd   | -              |
|                  |          |   |                |
|                  |          |   |                |

Examiner Signature al d Date Considered 6/1/04

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

**Search Hour Statement:** This form is estimated to take 2.6 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1445R/PTC

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

use as many sheets as necessary.

Sheet

of

Complete if Kn was

|                        |                     |
|------------------------|---------------------|
| Application Number     | 10/142,644 G25 801  |
| Filing Date            | 5/10/2002 7/23/2002 |
| First Named Inventor   | Anthony C. Zupparo  |
| Group Art Unit         | 1753                |
| Examiner Name          | Diamond, Alan D.    |
| Attorney Docket Number | 22122878-12         |

## OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

| Examiner Initials | Cite No. | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issues number(s), publisher, city and/or country where published. | Yr |
|-------------------|----------|--|----|
| ADD               | 79       | THEODORESCU, C.M., et al.; "Structure of Fe layers grown on InAs ...", Appl. Surf. Sci., 166, (2000) pp 137-142  | —  |
| ADD               | 80       | TIUSAN, C., et al.; "Quantum coherent transport versus diode-like effect in ...", Appl. Phys. Let. 79, (2001) pp 4231-4233   | —  |
| ADD               | 81       | TRIPA, C. Emil, et al.; "Surface-aligned photochemistry: Aiming reactive oxygen atoms..."; J. Chem. Phys., (2000) 112 pp. 2463-2469  | —  |
| ADD               | 82       | TRIPA, C. Emil, et al.; "Surface-aligned reaction of photogenerated oxygen atoms with ..."; Nature 398, pp 591 - 593 (1999)  | —  |
| ADD               | 83       | TRIPA, C. Emil; "Special Adsorption and Reaction Effects at Step Defect Sites on Platinum ..."; <a href="http://www.chem.pitt.edu/thesis.html#trips">http://www.chem.pitt.edu/thesis.html#trips</a> (abstract only) (Date Unknown).                              | —  |
| ADD               | 84       | VOLKENING, S., et al.; "CO oxidation on Pt(111)—Scanning tunneling microscopy experiments ..."; J. Chem. Phys. (2001) 114, pp. 6382-6395   | —  |
| ADD               | 85       | WATSON, D.T.P., et al.; "Isothermal and temperature-programmed oxidation of CH over Pt..."; Surf. Sci. preprint, year 2001   | —  |
| ADD               | 86       | WATSON, D.T.P., et al.; "Surface products of the dissociative adsorption of methane on Pt ..."; Surf. Sci. preprint, c. October 2001   | —  |
|                   |          |  |    |
|                   |          |  |    |
|                   |          |  |    |

Examiner  
Signature

Date  
Code

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional) <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

**Complete if Known**

|                        |                     |
|------------------------|---------------------|
| Application Number     | 10/MP-084 (25: 801) |
| Filing Date            | 5/4/2004 7/25/2004  |
| First Named Inventor   | Anthony C. Zamparo  |
| Group Art Unit         | 1753                |
| Examiner Name          | Diamond, Alan D.    |
| Attorney Docket Number | 22122878-12         |

Sheet 1 of 1

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, report, symposium, catalog, etc.), date, page(s), volume/issue number, publisher, city/country where published. | T <sup>2</sup> |
|-------------------|-----------------------|---|----------------|
| ADD               | 87                    | WILKE, Steffen, et al.; "Theoretical investigation of water formation on Rh and Pt Surfaces"; J. Chem. Phys., 112, (2000) PP 9986 - 9995  | ✓              |
| ADD               | 88                    | WINTERLIN, J, et al; "Atomic ...Reaction Rates ... Surface-Catalyzed ..."; Science, 278, (1997) pp. 1931 - 1934   | ✓              |
| ADD               | 89                    | WINTERLIN, J, et al.; "Existence of a "Hot" Atom Mechanism for the Dissociation of O <sub>2</sub> on Pt(111)"; Phys. Rev. Lett., 77, (1996), pp 123 - 126   | ✓              |
| ADD               | 90                    | ZAMBELLI, T., et al.; "Complex pathways in dissociative adsorption of oxygen on platinum"; Nature 396, pp 495 - 497 (1997)  | ✓              |
| ADD               | 91                    | ZHDANOV, V.P., et al.; "Substrate-mediated photoinduced chemical reactions on ultrathin metal films"; Surf. Sci., V. 432 (43) pp L599-L603, (1999)  | ✓              |
| ADD               | 92                    | ZHDANOV, Vladimir P.; "Nm-sized metal particles on a semiconductor surface, Schottky ..."; Surf. Sci. PROOF SUSC 2931, 20 April 2002  | ✓              |
| ADD               | 93                    | ZHUKOV, V. P., et al.; "Lifetimes of quasiparticle excitations in 4d transition metals ..."; Phys. Rev. B (2002) 65, Article 115116   | ✓              |
|                   |                       |   |                |
|                   |                       |   |                |
|                   |                       |   |                |
|                   |                       |   |                |
|                   |                       |   |                |

|                    |  |                 |        |
|--------------------|--|-----------------|--------|
| Examiner Signature |  | Date Considered | 5/1/04 |
|--------------------|--|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 606. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.